

# STM32 CubeMX

## 1. Description

### 1.1. Project

Project Name	Vortex RGB driver STM32G431RBT6
Board Name	custom
Generated with:	STM32CubeMX 6.16.0
Date	01/20/2026

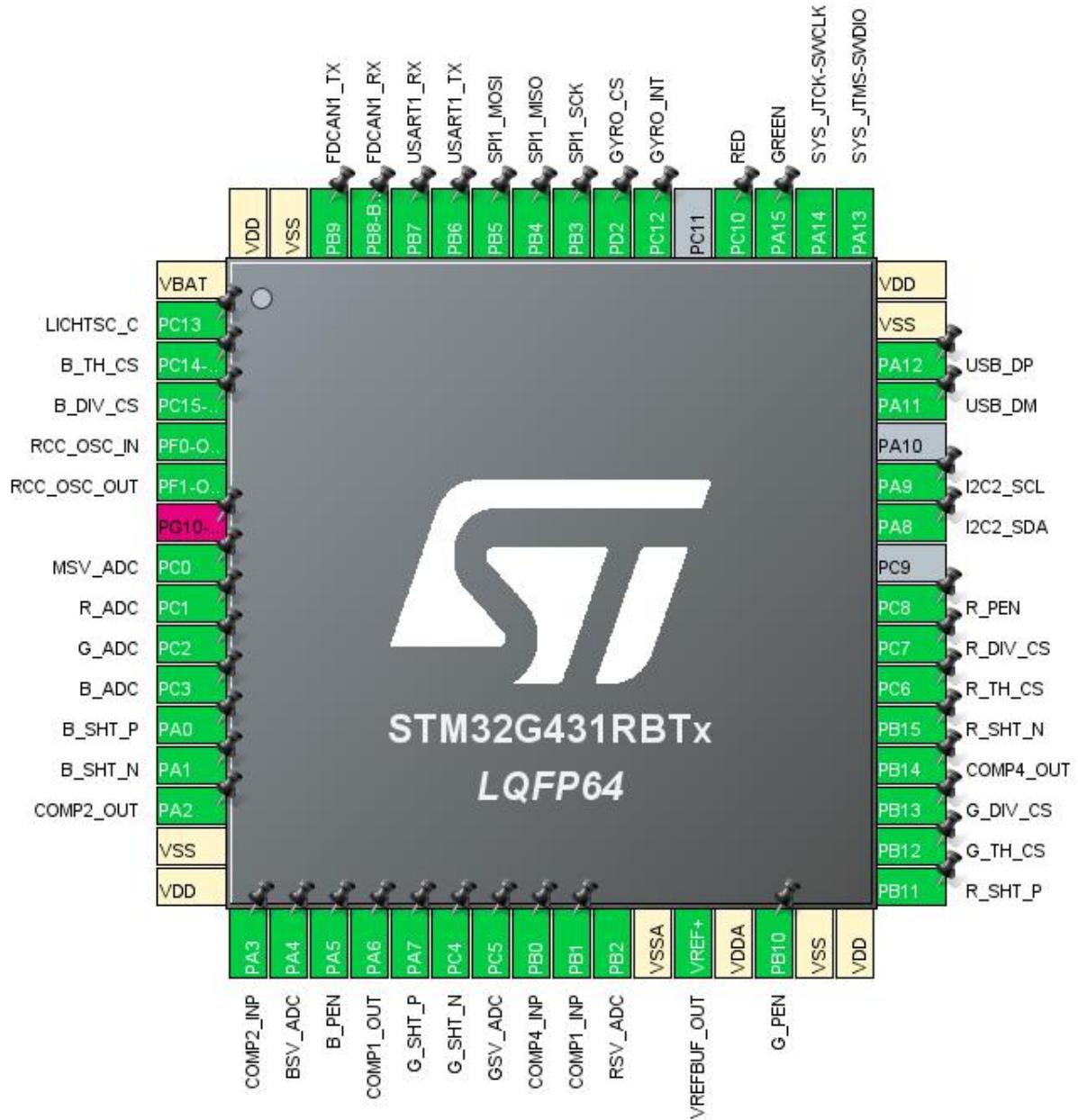
### 1.2. MCU

MCU Series	STM32G4
MCU Line	STM32G4x1
MCU name	STM32G431RBTx
MCU Package	LQFP64
MCU Pin number	64

### 1.3. Core(s) information

Core(s)	ARM Cortex-M4
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## 2. Pinout Configuration



### 3. Pins Configuration

Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
1	VBAT	Power		
2	PC13	I/O	GPIO_EXTI13	LICHTSC_C
3	PC14-OSC32_IN *	I/O	GPIO_Output	B_TH_CS
4	PC15-OSC32_OUT *	I/O	GPIO_Output	B_DIV_CS
5	PF0-OSC_IN	I/O	RCC_OSC_IN	
6	PF1-OSC_OUT	I/O	RCC_OSC_OUT	
7	PG10-NRST	I/O		
8	PC0	I/O	ADC1_IN6	MSV_ADC
9	PC1	I/O	ADC1_IN7	R_ADC
10	PC2	I/O	ADC1_IN8	G_ADC
11	PC3	I/O	ADC1_IN9	B_ADC
12	PA0	I/O	ADC1_IN1	B_SHT_P
13	PA1	I/O	ADC1_IN2	B_SHT_N
14	PA2	I/O	COMP2_OUT	
15	VSS	Power		
16	VDD	Power		
17	PA3	I/O	COMP2_INP	
18	PA4	I/O	ADC2_IN17	BSV_ADC
19	PA5 *	I/O	GPIO_Output	B_PEN
20	PA6	I/O	COMP1_OUT	
21	PA7	I/O	ADC2_IN4	G_SHT_P
22	PC4	I/O	ADC2_IN5	G_SHT_N
23	PC5	I/O	ADC2_IN11	GSV_ADC
24	PB0	I/O	COMP4_INP	
25	PB1	I/O	COMP1_INP	
26	PB2	I/O	ADC2_IN12	RSV_ADC
27	VSSA	Power		
28	VREF+	MonolO	VREFBUF_OUT	
29	VDDA	Power		
30	PB10 *	I/O	GPIO_Output	G_PEN
31	VSS	Power		
32	VDD	Power		
33	PB11	I/O	ADC2_IN14	R_SHT_P
34	PB12 *	I/O	GPIO_Output	G_TH_CS
35	PB13 *	I/O	GPIO_Output	G_DIV_CS
36	PB14	I/O	COMP4_OUT	

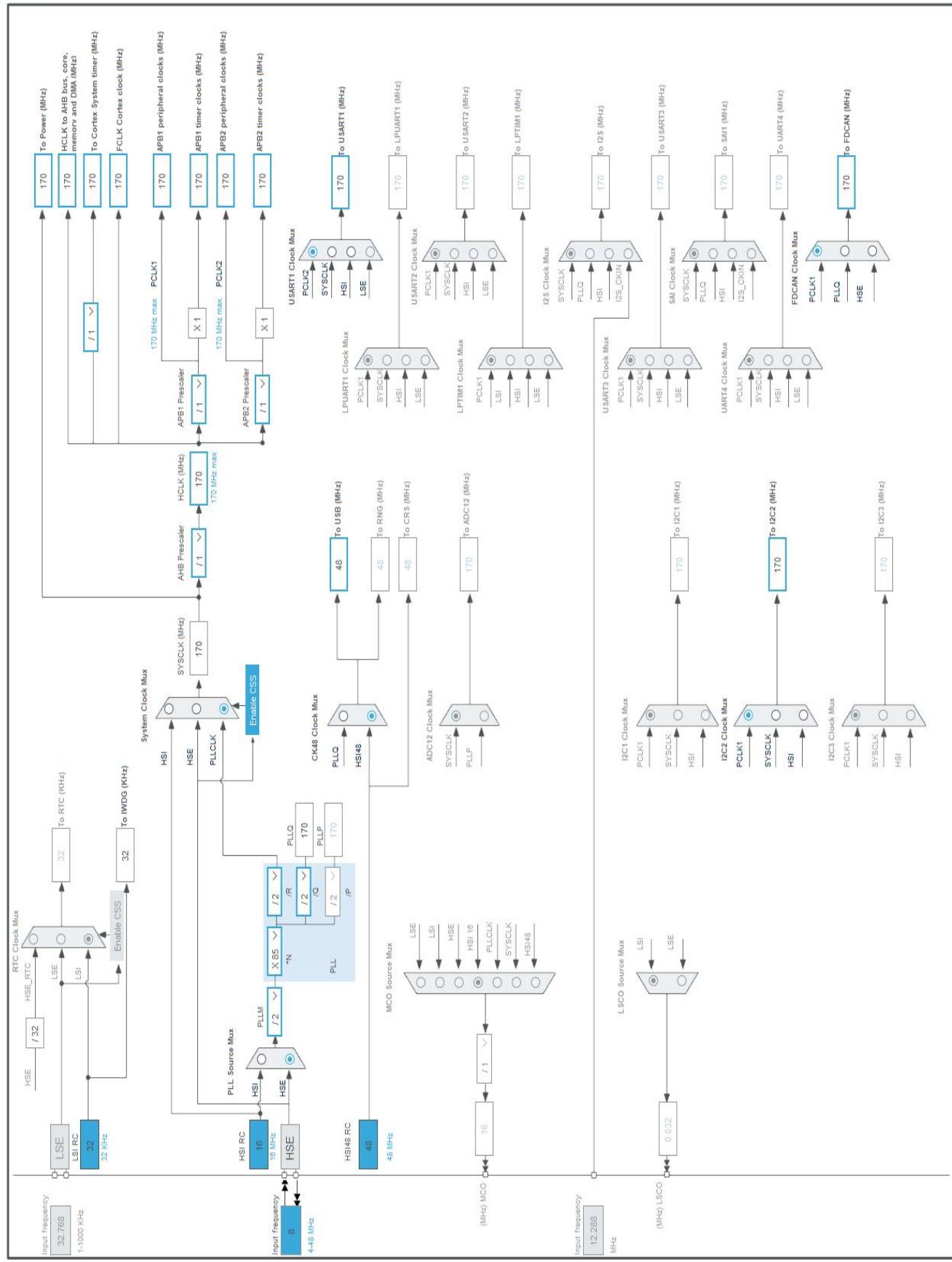
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Pin Number LQFP64	Pin Name (function after reset)	Pin Type	Alternate Function(s)	Label
37	PB15	I/O	ADC2_IN15	R_SHT_N
38	PC6 *	I/O	GPIO_Output	R_TH_CS
39	PC7 *	I/O	GPIO_Output	R_DIV_CS
40	PC8 *	I/O	GPIO_Output	R_PEN
42	PA8	I/O	I2C2_SDA	
43	PA9	I/O	I2C2_SCL	
45	PA11	I/O	USB_DM	
46	PA12	I/O	USB_DP	
47	VSS	Power		
48	VDD	Power		
49	PA13	I/O	SYS_JTMS-SWDIO	
50	PA14	I/O	SYS_JTCK-SWCLK	
51	PA15 *	I/O	GPIO_Output	GREEN
52	PC10 *	I/O	GPIO_Output	RED
54	PC12	I/O	GPIO_EXTI12	GYRO_INT
55	PD2 *	I/O	GPIO_Output	GYRO_CS
56	PB3	I/O	SPI1_SCK	
57	PB4	I/O	SPI1_MISO	
58	PB5	I/O	SPI1_MOSI	
59	PB6	I/O	USART1_TX	
60	PB7	I/O	USART1_RX	
61	PB8-BOOT0	I/O	FDCAN1_RX	
62	PB9	I/O	FDCAN1_TX	
63	VSS	Power		
64	VDD	Power		

\* The pin is affected with an I/O function

## **4. Clock Tree Configuration**



## 1. Power Consumption Calculator report

### 1.1. Microcontroller Selection

Series	STM32G4
Line	STM32G4x1
MCU	STM32G431RBTx
Datasheet	DS12589_Rev0

### 1.2. Parameter Selection

Temperature	25
Vdd	3.0

### 1.3. Battery Selection

Battery	Li-SOCL2(A3400)
Capacity	3400.0 mAh
Self Discharge	0.08 %/month
Nominal Voltage	3.6 V
Max Cont Current	100.0 mA
Max Pulse Current	200.0 mA
Cells in series	1
Cells in parallel	1

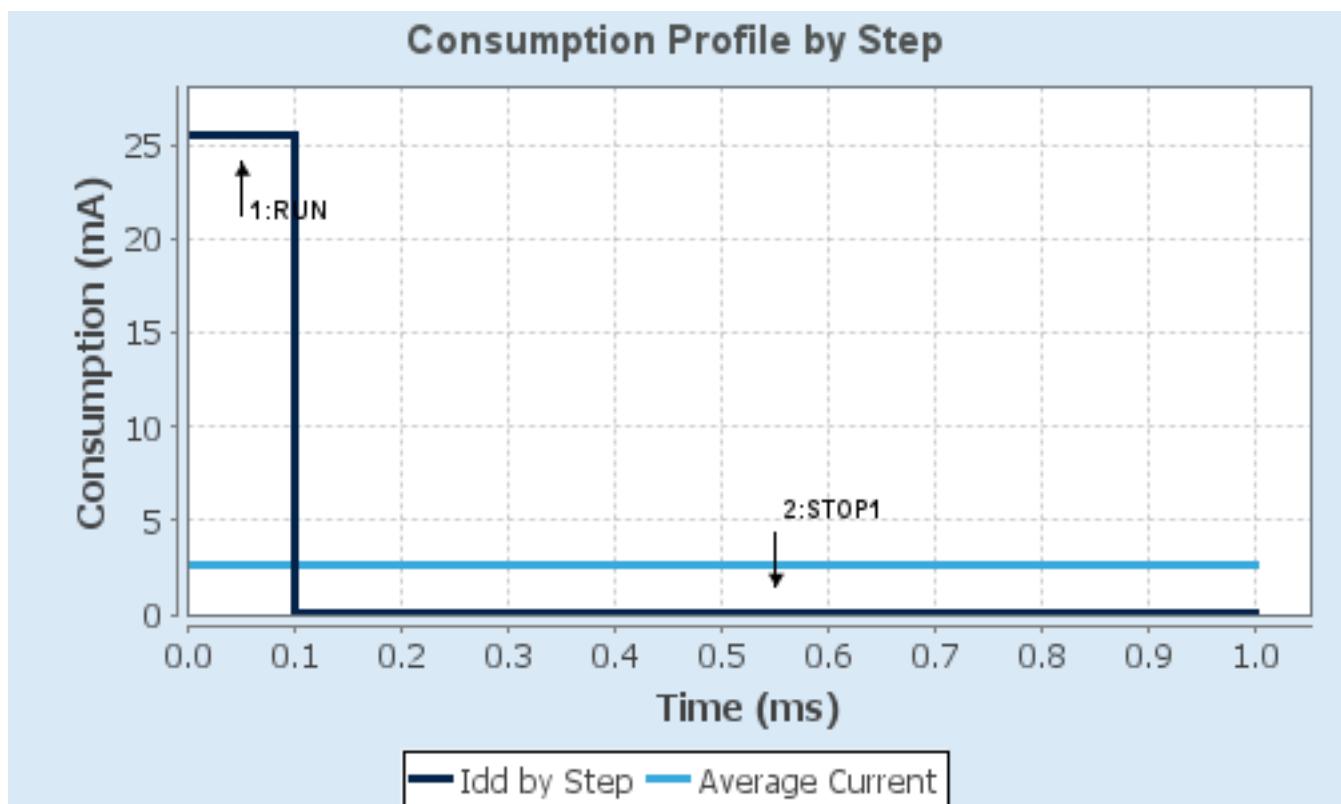
#### 1.4. Sequence

<b>Step</b>	Step1	Step2
<b>Mode</b>	RUN	STOP1
<b>Vdd</b>	3.0	3.0
<b>Voltage Source</b>	Battery	Battery
<b>Range</b>	Range1-Boost	NoRange
<b>Fetch Type</b>	FLASH/ART	NA
<b>CPU Frequency</b>	170 MHz	0 Hz
<b>Clock Configuration</b>	HSE BYP PLL	ALL CLOCKS OFF
<b>Clock Source Frequency</b>	4 MHz	0 Hz
<b>Peripherals</b>		
<b>Additional Cons.</b>	0 mA	0 mA
<b>Average Current</b>	25.5 mA	59 µA
<b>Duration</b>	0.1 ms	0.9 ms
<b>DMIPS</b>	213.0	0.0
<b>T<sub>a</sub> Max</b>	125.03	129.99
<b>Category</b>	In DS Table	In DS Table

#### 1.5. Results

Sequence Time	1 ms	Average Current	2.6 mA
Battery Life	1 month, 23 days, 22 hours	Average DMIPS	212.5 DMIPS

#### 1.6. Chart



## 2. Software Project

### 2.1. Project Settings

Name	Value
Project Name	Vortex RGB driver STM32G431RBT6
Project Folder	D:\Nextcloud\Arctos\Arctos\Optik\STM32CubeIDE\workspace_1.16.1\Vortex RGB
Toolchain / IDE	STM32CubeIDE
Firmware Package Name and Version	STM32Cube FW_G4 V1.6.1
Application Structure	Advanced
Generate Under Root	Yes
Do not generate the main()	No
Minimum Heap Size	0x200
Minimum Stack Size	0x400

### 2.2. Code Generation Settings

Name	Value
STM32Cube MCU packages and embedded software	Copy only the necessary library files
Generate peripheral initialization as a pair of '.c/.h' files	No
Backup previously generated files when re-generating	No
Keep User Code when re-generating	Yes
Delete previously generated files when not re-generated	Yes
Set all free pins as analog (to optimize the power consumption)	No
Enable Full Assert	No

### 2.3. Advanced Settings - Generated Function Calls

Rank	Function Name	Peripheral Instance Name
1	SystemClock_Config	RCC
2	MX_GPIO_Init	GPIO
3	MX_ADC1_Init	ADC1
4	MX_ADC2_Init	ADC2
5	MX_COMP1_Init	COMP1
6	MX_COMP2_Init	COMP2
7	MX_COMP4_Init	COMP4
8	MX_DAC1_Init	DAC1
9	MX_DAC3_Init	DAC3
10	MX_FDCAN1_Init	FDCAN1
11	MX_I2C2_Init	I2C2

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Rank	Function Name	Peripheral Instance Name
12	MX_USART1_UART_Init	USART1
13	MX_USB_Device_Init	USB_DEVICE
14	MX_IWDG_Init	IWDG

### 3. Peripherals and Middlewares Configuration

#### 3.1. ADC1

**IN1: IN1 Differential**

**IN6: IN6 Single-ended**

**IN7: IN7 Single-ended**

**IN8: IN8 Single-ended**

**IN9: IN9 Single-ended**

##### 3.1.1. Parameter Settings:

###### **ADCs\_Common\_Settings:**

Mode Independent mode

###### **ADC\_Settings:**

Clock Prescaler Synchronous clock mode divided by 4

Resolution ADC 12-bit resolution

Data Alignment Right alignment

Gain Compensation 0

Scan Conversion Mode Disabled

End Of Conversion Selection End of single conversion

Low Power Auto Wait Disabled

Continuous Conversion Mode Disabled

Discontinuous Conversion Mode Disabled

DMA Continuous Requests Disabled

Overrun behaviour Overrun data preserved

###### **ADC-Regular\_ConversionMode:**

Enable Regular Conversions Enable

Enable Regular Oversampling Disable

Number Of Conversion 1

External Trigger Conversion Source Regular Conversion launched by software

External Trigger Conversion Edge None

Rank 1

Channel Channel 1

Sampling Time 2.5 Cycles

Offset Number No offset

###### **ADC\_Injected\_ConversionMode:**

Enable Injected Conversions Disable

###### **Analog Watchdog 1:**

Enable Analog WatchDog1 Mode false

###### **Analog Watchdog 2:**

Enable Analog WatchDog2 Mode false

**Analog Watchdog 3:**

Enable Analog WatchDog3 Mode false

## 3.2. ADC2

**IN4: IN4 Differential**

**IN11: IN11 Single-ended**

**IN12: IN12 Single-ended**

**IN14: IN14 Differential**

**mode: IN17 Single-ended**

3.2.1. Parameter Settings:

**ADCs\_Common\_Settings:**

Mode Independent mode

**ADC\_Settings:**

Clock Prescaler	Synchronous clock mode divided by 4
Resolution	ADC 12-bit resolution
Data Alignment	Right alignment
Gain Compensation	0
Scan Conversion Mode	Disabled
End Of Conversion Selection	End of single conversion
Low Power Auto Wait	Disabled
Continuous Conversion Mode	Disabled
Discontinuous Conversion Mode	Disabled
DMA Continuous Requests	Disabled
Overrun behaviour	Overrun data preserved

**ADC-Regular\_ConversionMode:**

Enable Regular Conversions	Enable
Enable Regular Oversampling	Disable
Number Of Conversion	1
External Trigger Conversion Source	Regular Conversion launched by software
External Trigger Conversion Edge	None
<u>Rank</u>	1
Channel	Channel 4
Sampling Time	2.5 Cycles
Offset Number	No offset

**ADC\_Injected\_ConversionMode:**

Enable Injected Conversions Disable

**Analog Watchdog 1:**

Enable Analog WatchDog1 Mode false

**Analog Watchdog 2:**

Enable Analog WatchDog2 Mode false

**Analog Watchdog 3:**

Enable Analog WatchDog3 Mode false

### 3.3. COMP1

**mode: Input [+]**

**Input [-]: DAC1 OUT1**

**mode: ExternalOutput**

#### 3.3.1. Parameter Settings:

**Basic Parameters:**

Trigger Mode None

Hysteresis Level None

**Output Configuration:**

Blanking Source None

Output Polarity COMP output on GPIO isn't inverted

### 3.4. COMP2

**mode: Input [+]**

**Input [-]: DAC1 OUT2**

**mode: ExternalOutput**

#### 3.4.1. Parameter Settings:

**Basic Parameters:**

Trigger Mode None

Hysteresis Level None

**Output Configuration:**

Blanking Source None

Output Polarity COMP output on GPIO isn't inverted

### 3.5. COMP4

**mode: Input [+]**

**Input [-]: DAC3 OUT2**

**mode: ExternalOutput**

3.5.1. Parameter Settings:

**Basic Parameters:**

Trigger Mode	None
Hysteresis Level	None

**Output Configuration:**

Blanking Source	None
Output Polarity	COMP output on GPIO isn't inverted

**3.6. DAC1**

**OUT1 mode: OUT1 Connected to on chip-peripherals only**

**OUT2 mode: OUT2 Connected to on chip-peripherals only**

3.6.1. Parameter Settings:

**DAC Out1 Settings:**

Mode selected	Normal Mode
Output Buffer	Disable
DAC High Frequency	Mode Automatic
DMA Double Data	Disable
Signed Format	Disable
Trigger	None
Trigger2	None
User Trimming	Factory trimming

**DAC Out2 Settings:**

Mode selected	Normal Mode
Output Buffer	Disable
DAC High Frequency	Mode Automatic
DMA Double Data	Disable
Signed Format	Disable
Trigger	None
Trigger2	None
User Trimming	Factory trimming

**3.7. DAC3**

**mode: OUT2 mode**

3.7.1. Parameter Settings:

**DAC Out2 Settings:**

Mode selected	Normal Mode
Output Buffer	Disable
DAC High Frequency	Mode Automatic
DMA Double Data	Disable
Signed Format	Disable
Trigger	None
Trigger2	None
User Trimming	Factory trimming

**3.8. FDCAN1**

**mode: Activated**

3.8.1. Parameter Settings:

**Basic Parameters:**

Clock Divider	Divide kernel clock by 1
Frame Format	Classic mode
Mode	Normal mode
Auto Retransmission	Disable
Transmit Pause	Disable
Protocol Exception	Disable
Nominal Sync Jump Width	1
Data Prescaler	1
Data Sync Jump Width	1
Data Time Seg1	1
Data Time Seg2	1
Std Filters Nbr	0
Ext Filters Nbr	0
Tx Fifo Queue Mode	FIFO mode

**Bit Timings Parameters:**

Nominal Prescaler	16
Nominal Time Quantum	<b>94.11764705882354 *</b>
Nominal Time Seg1	1
Nominal Time Seg2	1
Nominal Time for one Bit	<b>282 *</b>
Nominal Baud Rate	<b>3541666 *</b>

### 3.9. I2C2

#### I2C: I2C

##### 3.9.1. Parameter Settings:

###### **Timing configuration:**

Custom Timing	Disabled
I2C Speed Mode	Standard Mode
I2C Speed Frequency (KHz)	100
Rise Time (ns)	100
Fall Time (ns)	100
Coefficient of Digital Filter	0
Analog Filter	Enabled
Timing	<b>0x40B285C2 *</b>

###### **Slave Features:**

Clock No Stretch Mode	Disabled
General Call Address Detection	Disabled
Primary Address Length selection	7-bit
Dual Address Acknowledged	Disabled
Primary slave address	0

### 3.10. IWDG

#### **mode: Activated**

##### 3.10.1. Parameter Settings:

###### **Watchdog Clocking:**

IWDG counter clock prescaler	4
IWDG window value	4095
IWDG down-counter reload value	4095

### 3.11. RCC

#### **High Speed Clock (HSE): Crystal/Ceramic Resonator**

##### 3.11.1. Parameter Settings:

###### **System Parameters:**

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VDD voltage (V)	3.3
Instruction Cache	Enabled
Prefetch Buffer	Disabled
Data Cache	Enabled
Flash Latency(WS)	4 WS (5 CPU cycle)

### RCC Parameters:

HSI Calibration Value	64
HSE Startup Timeout Value (ms)	100
LSE Startup Timeout Value (ms)	5000

### Power Parameters:

Power Regulator Voltage Scale	Power Regulator Voltage Scale 1 boost
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### Peripherals Clock Configuration:

Generate the peripherals clock configuration	TRUE
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## 3.12. SPI1

### Mode: Full-Duplex Master

#### 3.12.1. Parameter Settings:

##### Basic Parameters:

Frame Format	Motorola
Data Size	<b>8 Bits *</b>
First Bit	MSB First

##### Clock Parameters:

Prescaler (for Baud Rate)	<b>32 *</b>
Baud Rate	<b>5.3125 MBits/s *</b>
Clock Polarity (CPOL)	Low
Clock Phase (CPHA)	1 Edge

##### Advanced Parameters:

CRC Calculation	Disabled
NSSP Mode	Enabled
NSS Signal Type	Software

## 3.13. SYS

### Debug: Serial Wire

### VREFBUF Mode: Internal voltage reference

### Timebase Source: SysTick

**mode: save power of non-active UCPD - deactive Dead Battery pull-up**

### 3.13.1. Parameter Settings:

#### **Voltage\_Reference\_Buffer\_Settings:**

Trimming Mode	Factory Trimming
Internal Voltage reference scale	SCALE 0: around 2.048 V

## **3.14. USART1**

### **Mode: Asynchronous**

#### 3.14.1. Parameter Settings:

#### **Basic Parameters:**

Baud Rate	115200
Word Length	8 Bits (including Parity)
Parity	None
Stop Bits	1

#### **Advanced Parameters:**

Data Direction	Receive and Transmit
Over Sampling	16 Samples
Single Sample	Disable
ClockPrescaler	1
Fifo Mode	Disable
Txfifo Threshold	1 eighth full configuration
Rxfifo Threshold	1 eighth full configuration

#### **Advanced Features:**

Auto Baudrate	Disable
TX Pin Active Level Inversion	Disable
RX Pin Active Level Inversion	Disable
Data Inversion	Disable
TX and RX Pins Swapping	Disable
Overrun	Enable
DMA on RX Error	Enable
MSB First	Disable

## **3.15. USB**

### **mode: Device (FS)**

### 3.15.1. Parameter Settings:

#### **Basic Parameters:**

Speed	Full Speed 12MBit/s
Physical interface	Internal Phy
Sof Enable	Disabled

#### **Power Parameters:**

Low Power	Disabled
Link Power Management	Disabled
Battery Charging	Disabled

## **3.16. STMicroelectronics.X-CUBE-MEMS1.12.0.0**

**mode: BoardOoPartJjAccGyr**

### 3.16.1. Platform Settings:

LSM6DSOX_CS	PD2
LSM6DSOX BUS IO driver	SPI1

## **3.17. USB\_DEVICE**

**Class For FS IP: Communication Device Class (Virtual Port Com)**

### 3.17.1. Parameter Settings:

#### **Basic Parameters:**

USBD_MAX_NUM_INTERFACES (Maximum number of supported interfaces)	1
USBD_MAX_NUM_CONFIGURATION (Maximum number of supported configuration)	1
USBD_MAX_STR_DESC_SIZ (Maximum size for the string descriptors)	512
USBD_SELF_POWERED (Enabled self power)	Enabled
USBD_DEBUG_LEVEL (USBD Debug Level)	0: No debug message
USBD_LPM_ENABLED (Link Power Management)	1: Link Power Management supported

#### **Class Parameters:**

USB CDC Rx Buffer Size	1024
USB CDC Tx Buffer Size	1024

### 3.17.2. Device Descriptor:

#### **Device Descriptor:**

VID (Vendor IDentifier)	1155
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LANGID\_STRING (Language Identifier) English(United States)  
MANUFACTURER\_STRING (Manufacturer Identifier) STMicroelectronics

### Device Descriptor FS:

PID (Product IDentifier)	22336
PRODUCT_STRING (Product Identifier)	STM32 Virtual ComPort
CONFIGURATION_STRING (Configuration Identifier)	CDC Config
INTERFACE_STRING (Interface Identifier)	CDC Interface

\* User modified value

## 4. System Configuration

### 4.1. GPIO configuration

IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
ADC1	PC0	ADC1_IN6	Analog mode	No pull-up and no pull-down	n/a	MSV_ADC
	PC1	ADC1_IN7	Analog mode	No pull-up and no pull-down	n/a	R_ADC
	PC2	ADC1_IN8	Analog mode	No pull-up and no pull-down	n/a	G_ADC
	PC3	ADC1_IN9	Analog mode	No pull-up and no pull-down	n/a	B_ADC
	PA0	ADC1_IN1	Analog mode	No pull-up and no pull-down	n/a	B_SHT_P
	PA1	ADC1_IN2	Analog mode	No pull-up and no pull-down	n/a	B_SHT_N
ADC2	PA4	ADC2_IN17	Analog mode	No pull-up and no pull-down	n/a	BSV_ADC
	PA7	ADC2_IN4	Analog mode	No pull-up and no pull-down	n/a	G_SHT_P
	PC4	ADC2_IN5	Analog mode	No pull-up and no pull-down	n/a	G_SHT_N
	PC5	ADC2_IN11	Analog mode	No pull-up and no pull-down	n/a	GSV_ADC
	PB2	ADC2_IN12	Analog mode	No pull-up and no pull-down	n/a	RSV_ADC
	PB11	ADC2_IN14	Analog mode	No pull-up and no pull-down	n/a	R_SHT_P
	PB15	ADC2_IN15	Analog mode	No pull-up and no pull-down	n/a	R_SHT_N
COMP1	PA6	COMP1_OUT	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB1	COMP1_INP	Analog mode	No pull-up and no pull-down	n/a	
COMP2	PA2	COMP2_OUT	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PA3	COMP2_INP	Analog mode	No pull-up and no pull-down	n/a	
COMP4	PB0	COMP4_INP	Analog mode	No pull-up and no pull-down	n/a	
	PB14	COMP4_OUT	Alternate Function Push Pull	No pull-up and no pull-down	Low	
FDCAN1	PB8-BOOT0	FDCAN1_RX	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB9	FDCAN1_TX	Alternate Function Push Pull	No pull-up and no pull-down	Low	
I2C2	PA8	I2C2_SDA	Alternate Function Open Drain	No pull-up and no pull-down	Low	
	PA9	I2C2_SCL	Alternate Function Open Drain	No pull-up and no pull-down	Low	
RCC	PF0-OSC_IN	RCC_OSC_IN	n/a	n/a	n/a	
	PF1-OSC_OUT	RCC_OSC_OUT	n/a	n/a	n/a	
SPI1	PB3	SPI1_SCK	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB4	SPI1_MISO	Alternate Function Push Pull	No pull-up and no pull-down	Low	
	PB5	SPI1_MOSI	Alternate Function Push Pull	No pull-up and no pull-down	Low	
SYS	VREF+	VREFBUF_OUT	n/a	n/a	n/a	
	PA13	SYS_JTMS-SWDIO	n/a	n/a	n/a	
	PA14	SYS_JTCK-SWCLK	n/a	n/a	n/a	
USART1	PB6	USART1_TX	Alternate Function Push Pull	No pull-up and no pull-down	Low	

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IP	Pin	Signal	GPIO mode	GPIO pull/up pull down	Max Speed	User Label
	PB7	USART1_RX	Alternate Function Push Pull	No pull-up and no pull-down	Low	
USB	PA11	USB_DM	n/a	n/a	n/a	
	PA12	USB_DP	n/a	n/a	n/a	
GPIO	PC13	GPIO_EXTI13	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	LICHTSC_C
	PC14-OSC32_IN	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	B_TH_CS
	PC15-OSC32_OUT	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	B_DIV_CS
	PA5	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	B_PEN
	PB10	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	G_PEN
	PB12	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	G_TH_CS
	PB13	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	G_DIV_CS
	PC6	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	R_TH_CS
	PC7	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	R_DIV_CS
	PC8	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	R_PEN
	PA15	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GREEN
	PC10	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	RED
	PC12	GPIO_EXTI12	External Interrupt Mode with Rising edge trigger detection	No pull-up and no pull-down	n/a	GYRO_INT
	PD2	GPIO_Output	Output Push Pull	No pull-up and no pull-down	Low	GYRO_CS

## 4.2. DMA configuration

nothing configured in DMA service

## 4.3. NVIC configuration

### 4.3.1. NVIC

Interrupt Table	Enable	Preenemption Priority	SubPriority
Non maskable interrupt	true	0	0
Hard fault interrupt	true	0	0
Memory management fault	true	0	0
Prefetch fault, memory access fault	true	0	0
Undefined instruction or illegal state	true	0	0
System service call via SWI instruction	true	0	0
Debug monitor	true	0	0
Pendable request for system service	true	0	0
System tick timer	true	15	0
USB low priority interrupt remap	true	0	0
PVD/PVM1/PVM2/PVM3/PVM4 interrupts through EXTI lines 16/38/39/40/41		unused	
Flash global interrupt		unused	
RCC global interrupt		unused	
ADC1 and ADC2 global interrupt		unused	
USB high priority interrupt remap		unused	
FDCAN1 interrupt 0		unused	
FDCAN1 interrupt 1		unused	
I2C2 event interrupt / I2C2 wake-up interrupt through EXTI line 24		unused	
I2C2 error interrupt		unused	
SPI1 global interrupt		unused	
USART1 global interrupt / USART1 wake-up interrupt through EXTI line 25		unused	
EXTI line[15:10] interrupts		unused	
TIM6 global interrupt, DAC1 and DAC3 channel underrun error interrupts		unused	
COMP1, COMP2 and COMP3 interrupts through EXTI lines 21, 22 and 29		unused	
COMP4 interrupt through EXTI line 30		unused	
FPU global interrupt		unused	

### 4.3.2. NVIC Code generation

Enabled interrupt Table	Select for init sequence ordering	Generate IRQ handler	Call HAL handler
Non maskable interrupt	false	true	false
Hard fault interrupt	false	true	false
Memory management fault	false	true	false

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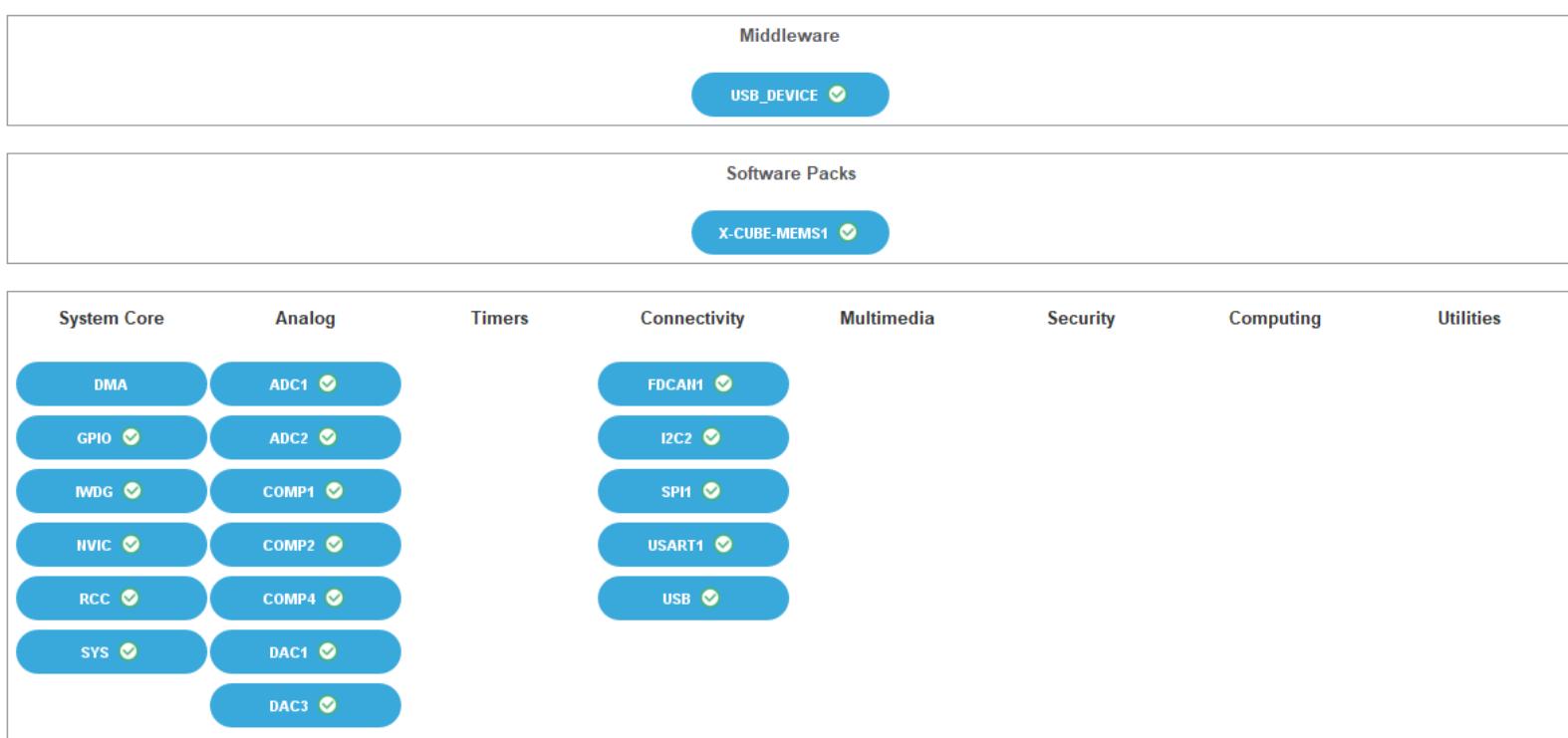
Enabled interrupt Table	Select for init sequence ordering	Generate IRQ handler	Call HAL handler
Prefetch fault, memory access fault	false	true	false
Undefined instruction or illegal state	false	true	false
System service call via SWI instruction	false	true	false
Debug monitor	false	true	false
Pendable request for system service	false	true	false
System tick timer	false	true	true
USB low priority interrupt remap	false	true	true

\* User modified value

## 5. System Views

### 5.1. Category view

#### 5.1.1. Current



## 6. Software Pack Report

### 6.1. Software Pack selected

Vendor	Name	Version	Component
STMicroelectronics	X-CUBE-MEMS1	12.0.0	Class : Board Part Group : AccGyr SubGroup : LSM6DSOX Variant : SPI Version : 1.10.0

## 7. Docs & Resources

Type	Link
BSDL files	<a href="https://www.st.com/resource/en/bsdl_model/stm32g4_bsdl.zip">https://www.st.com/resource/en/bsdl_model/stm32g4_bsdl.zip</a>
IBIS models	<a href="https://www.st.com/resource/en/ibis_model/stm32g4_ibis.zip">https://www.st.com/resource/en/ibis_model/stm32g4_ibis.zip</a>
System View	<a href="https://www.st.com/resource/en/svd/stm32g4_svd.zip">https://www.st.com/resource/en/svd/stm32g4_svd.zip</a>
Description	
Presentations	<a href="https://www.st.com/resource/en/product_presentation/stm32-stm8_embedded_software_solutions.pdf">https://www.st.com/resource/en/product_presentation/stm32-stm8_embedded_software_solutions.pdf</a>
Presentations	<a href="https://www.st.com/resource/en/product_presentation/stm32_eval-tools_portfolio.pdf">https://www.st.com/resource/en/product_presentation/stm32_eval-tools_portfolio.pdf</a>
Presentations	<a href="https://www.st.com/resource/en/product_presentation/stm32_stm8_functional-safety-packages.pdf">https://www.st.com/resource/en/product_presentation/stm32_stm8_functional-safety-packages.pdf</a>
Presentations	<a href="https://www.st.com/resource/en/product_presentation/stm32-usb-c-pd-solutions-presentation.pdf">https://www.st.com/resource/en/product_presentation/stm32-usb-c-pd-solutions-presentation.pdf</a>
Presentations	<a href="https://www.st.com/resource/en/product_presentation/stm32-stm8_software_development_tools.pdf">https://www.st.com/resource/en/product_presentation/stm32-stm8_software_development_tools.pdf</a>
Presentations	<a href="https://www.st.com/resource/en/product_presentation/microcontrollers-stm32-family-overview.pdf">https://www.st.com/resource/en/product_presentation/microcontrollers-stm32-family-overview.pdf</a>
Presentations	<a href="https://www.st.com/resource/en/product_presentation/microcontrollers-stm32g4-series-product-overview.pdf">https://www.st.com/resource/en/product_presentation/microcontrollers-stm32g4-series-product-overview.pdf</a>
Brochures	<a href="https://www.st.com/resource/en/brochure/products-and-solutions-for-plcs-and-smart-i-os.pdf">https://www.st.com/resource/en/brochure/products-and-solutions-for-plcs-and-smart-i-os.pdf</a>
Brochures	<a href="https://www.st.com/resource/en/brochure/expansion-boards-for-intelligent-power-switches.pdf">https://www.st.com/resource/en/brochure/expansion-boards-for-intelligent-power-switches.pdf</a>
Flyers	<a href="https://www.st.com/resource/en/flyer/flstm32g4.pdf">https://www.st.com/resource/en/flyer/flstm32g4.pdf</a>
Flyers	<a href="https://www.st.com/resource/en/flyer/flstm32nucleo.pdf">https://www.st.com/resource/en/flyer/flstm32nucleo.pdf</a>
Flyers	<a href="https://www.st.com/resource/en/flyer/flstm32trust.pdf">https://www.st.com/resource/en/flyer/flstm32trust.pdf</a>
Flyers	<a href="https://www.st.com/resource/en/flyer/fldpstpf11120.pdf">https://www.st.com/resource/en/flyer/fldpstpf11120.pdf</a>
Security Bulletin	<a href="https://www.st.com/resource/en/technical_note/tn1489-security-bulletin-tn1489stpsirt-physical-attacks-on-stm32-and-stm32cube-firmware-stmicroelectronics.pdf">https://www.st.com/resource/en/technical_note/tn1489-security-bulletin-tn1489stpsirt-physical-attacks-on-stm32-and-stm32cube-firmware-stmicroelectronics.pdf</a>

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for related Tools & Software [guide-for-the-xcubesbsfu-stm32cube-expansion-package-stmicroelectronics.pdf](#)

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Errata Sheets	<a href="https://www.st.com/resource/en/errata_sheet/es0431-stm32g431xx441xx-device-errata-stmicroelectronics.pdf">https://www.st.com/resource/en/errata_sheet/es0431-stm32g431xx441xx-device-errata-stmicroelectronics.pdf</a>
Datasheet	<a href="https://www.st.com/resource/en/datasheet/dm00507199.pdf">https://www.st.com/resource/en/datasheet/dm00507199.pdf</a>
Programming Manuals	<a href="https://www.st.com/resource/en/programming_manual/pm0214-stm32-cortexm4-mcus-and-mpus-programming-manual-stmicroelectronics.pdf">https://www.st.com/resource/en/programming_manual/pm0214-stm32-cortexm4-mcus-and-mpus-programming-manual-stmicroelectronics.pdf</a>
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